REMARKS

Claims 1-27 are pending. The allowance of claims 21-22 and 25-27 is acknowledged with appreciation, as is the indication that dependent claims 5-9, 11-16, 19 and 24 would be allowable if rewritten in independent form. These allowable dependent claims are not being rewritten into independent form, however, because it is believed that there their parent claims are allowable, for the reasons given below. No amendments to the application are being made by this Response.

Claims 1-4, 10, 17, 18, 20 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0205328 A1 of Langford et al. (hereinafter "Langford et al.") in view of U.S. Patent Application Publication No. 2004/0088534 A1 of Smith et al. (hereinafter "Smith et al."). However, it is respectfully submitted that Langford et al. describe something quite different than the method and memory system recited in the rejected claims, and that Smith et al. do not suggest that Langford et al. make the significant modification in their approach and direction that is required to meet the terms of the claims.

Langford et al. describe the storage of two or more copies of boot code in a data processing system. A flag Pside is set when a "permanent" copy of the boot code is valid, and a flag Tside when a redundant "temporary" copy is valid. These flags are set when the boot code is updated (Langford et al. Fig. 5), by use of a cyclical redundancy check (CRC) across the entire image or code (Langford et al. ¶0038). When boot code is being loaded upon the data processing system being initiated (Langford et al. Fig. 4), the Pside flag is first checked, and if it is set to valid, the Pside code is loaded into the computer system memory. If the Pside code is invalid, then the Tside flag is checked to see if the Tside copy of the boot code is valid. If it is, the Tside copy is loaded into system memory. If both the Pside and Tside flags are set to invalid, then the loading process is terminated.

Each of the Pside and Tside flags are apparently set only if all the data bits of the respective boot code copies have been determined by a CRC to be valid. Langford et al. clearly want to avoid beginning to load a copy of the boot code if any portion of it is invalid. "In this manner, boot time is saved from preventing the computer system from booting from a defective

firmware image until an error is encountered and then having to begin the boot process again using a redundant image." (Langford et al. ¶0029.)

Claim 1 of the present application, on the other hand, recites that the first boot code copy is transferred to a RAM and any bit errors in the transferred copy are identified. If any bit errors are correctable, they are corrected. If not, at least some of the second boot code copy is loaded in place of at least the portion of the first copy containing the uncorrectable bit errors. Langford et al., on the other hand, teach that loading of a copy of the boot code is not begun unless its validity flag (Pside or Tside) is first determined to indicate the copy is valid. There is no suggestion or mention by Langford et al. of the claimed identification and correction of erroneous boot data bits in the loading process. Loading of boot code will not be commenced unless its validity flag indicates that there are no bit errors in the code.

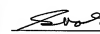
The secondary Smith et al. patent is cited in the Office Action as evidence that it would have been obvious to modify the Langford et al. method to include correcting bit errors of the first boot code copy, if possible, before the second copy is used. This appears to be based solely on the mention by Smith et al. (¶0047) of use of error correction codes. It is respectfully submitted that this would not have suggested that the first copy of the boot code of Langford et al. be corrected before there is any loading of the second copy, which is what is claimed. This is much more than what is mentioned by Smith et al. Further, Langford et al. expressly teach against the making of such a modification by stressing the importance of determining the validity of a boot code copy before any loading of it into system RAM is allowed to begin. Any combination of Langford et al. and Smith et al. can only be made in hindsight by first eliminating a core feature of the Langford et al. method, namely to commence loading of boot code only if its validity flag indicates it is valid. This does not, of course, have any place in a proper obviousness analysis. Claim 1 and its rejected dependent claims 2-4 and 10 are therefore submitted to be allowable.

Each of the remaining rejected independent claims 17 and 23 also recites the use of an error correction code to correct bit errors in a first boot code copy, if possible, before loading any portion of the second copy. The detail in which this feature is recited in these claims places them even further from the cited Langford et al. and Smith et al. references. Claim 17, its dependent claims 18 and 20, and claim 23 are therefore also submitted to be allowable.

Accordingly, it is believed that this application is now in condition for allowance and an early indication of its allowance is solicited. However, if the Examiner has any further matters that need to be resolved, a telephone call to the undersigned at 415-318-1163 would be appreciated.

FILED VIA EFS

Respectfully submitted,



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Date

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